

SECTION 5.0 – OTHER CEQA SECTIONS

INTRODUCTION

The CEQA Guidelines require a description of the environmental setting before the commencement of the project in order to examine and analyze the effects of the physical change in the environment after the project is completed. Because the Shore terminal is an operating facility, this EIR examines the impacts of continued operation of the terminal.

The impact analysis focuses both on routine operating conditions of the marine terminal and accidents that could occur during routine operations. Routine operations are those daily activities involved in receipt of crude and transfer of product between vessels, and the transit of vessels from the Golden Gate to/from the marine terminal. Accident conditions addressed include fire, explosions, and spills, and their resultant consequences. This document addresses briefly impacts from tankering along the outer coast.

As part of the impact analyses, the consequences of oil spills that could result from accidents are evaluated. The Unocal Marine Terminal Lease Consideration EIR (Chambers Group 1994), Shore Terminal's Oil Spill Response Plan (BlueWater Consultants 2001), and pertinent Clean Bay oil spill trajectory models as contained in Wickland's Application Responses and Supporting Appendices (Wickland 1998) contained extensive oil spill modeling that show that oil spread can potentially cover the entire area between I-80 and the Delta entrance, which is near West Pittsburgh. Thus, it is assumed that any sensitive resources throughout that area could be oiled. The analyses for accident conditions in this EIR examine the potential impacts to sensitive environmental resources between I-80 and the Delta entrance, and provide specific mitigation to be conducted by Shore to reduce or eliminate impacts. The primary analysis focuses on the terminal and the area between I-80 and the Delta, with secondary and tertiary emphasis on the Bay and outer coast, respectively.

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

As per the California Environmental Quality Act (CEQA), Section 15126.2 (b) presents those significant environmental impacts that cannot be avoided in the granting of a new lease by the California State Lands Commission (CSLC) to the Shore Terminals' Martinez marine terminal. These impacts would remain significant and unavoidable (Class I), even after incorporation of available and feasible mitigation measures.

- Spill Response Capability for Large Spills at Marine Terminal. Even though the chance of an oil spill is low, if an accidental spill occurs, unavoidable significant impacts can result. Based on the number of vessel calls in 2002, an average of about one spill every 2 years can be expected from the Shore terminal. The spill

1 would be expected to be less than 1 gallon 54 percent of the time, and less than 10
2 gallons 70 percent of the time. The probability of a spill larger than 1,000 gallons
3 from the terminal would be 3 percent or 1 spill every 38 years. The annual
4 probability of a spill greater than 42,000 gallons (1,000 barrels [bbls]) from the Shore
5 terminal, including a tank vessel at berth, equates to an expected mean time
6 between spills of 160 years. Based on the maximum number of annual vessel calls
7 that the terminal can handle (325), an average of about 1.5 spills per year can be
8 expected. The consequences of a spill would depend on the size of the spill, the
9 effectiveness of the response effort, and the biological, commercial fisheries,
10 shoreline, and other resources impacted by the spill.

11
12 The terminal meets all federal and state requirements for response capabilities.
13 Shore and their response contractors are expected to be able to prevent a small spill
14 of less than 10 gallons from causing significant impacts. In most cases, the
15 response capability is considered adequate to contain a spill of 50 bbl or less and
16 prevent it spreading over a wide area. However, it may not be possible to contain
17 and recover all of the oil from a 50 bbl spill, nor is it likely that the terminal would be
18 able to contain and recover all the oil from a release of greater than 1,000 bbl. Thus,
19 moderate spills of 1,000 gallons and large spills of 1,000 bbl most likely would result
20 in a significant adverse impact (Class I) that would have residual effects after first
21 response mitigation efforts.

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23 ➤ Large Spills from Vessels in Transit. The potential for a spill from the marine terminal,
24 including the tank vessel while it is at the terminal, was found to be much greater than
25 the potential of a spill from a tank vessel transiting within the Bay or outer coast.
26 However, while the probability of a large spill from vessels in transit is small, the
27 consequences of such a spill would be a significant adverse impact (Class I).
- 28
29 ➤ Segregated Ballast Water and Introduction of Non-Indigenous Species. Discharge of
30 segregated ballast water could result in a significant adverse impact to water quality
31 (Class I) if viruses, toxic algae, or other harmful microorganisms are released.
32 Discharge of segregated ballast water or hull fouling could introduce exotic species
33 to the aquatic ecosystem of the San Francisco estuary. Introduction of exotic
34 species, including the Asian clam *Potamocorbula amurensis* introduced in 1986, has
35 had a devastating effect on the plankton and benthic communities of the
36 San Francisco estuary. Continued introduction of exotic species would have a
37 significant adverse impact on planktonic and benthic communities (Class I). The
38 introduction of non-indigenous species through terminal operations could have
39 significant adverse impacts (Class I) to fishes, water-associated birds, marine
40 mammals, and listed species through direct competition, destabilization of the food
41 web, accumulation of toxins in the tissues of the voraciously filter-feeding Asian
42 clam, or the introduction of disease organisms or toxic algae. Compliance with the
43 California Marine Invasive Species Control Act and the California Ballast Water
44 Management for Control of Nonindigenous Species Act, with completion of ballast
45 water reporting will help to reduce the impact of ballast water discharges, but
46 impacts will remain significant (Class I).

- 1 ➤ Marine Anti-Fouling Paints. Marine anti-fouling paints are used to reduce nuisance
2 algal and marine growth on ships. Anti-fouling paints are biocides that contain
3 copper, sodium, zinc, and tributyltin (TBT) as the active ingredients. All of these are
4 meant to be toxic to marine life that would settle or attach to the hulls of ships
5 Because of the high toxicity of organotins to marine organisms, the use of these
6 substances on vessels associated with Shore Terminals is considered to be a
7 significant adverse impact to water quality that cannot be mitigated to less than
8 significant (Class I). Impacts of anti-fouling paints on water quality may be partially
9 mitigated if Shore Terminals requires that vessel operators document that vessels
10 using the marine terminal have had no new applications of TBT or other biocide-based
11 anti-fouling paints. However, until all TBT is phased out by 2008, vessels with old
12 applications of TBT on their hulls will visit the terminal. Although it is reasonable for
13 Shore Terminals to require vessels to document no new TBT applications (per IMO
14 mandate), Shore Terminals cannot feasibly require vessels to remove TBT from their
15 hulls until the IMO mandate comes into effect in 2008. Therefore, until all TBT is
16 gone from vessels using the Shore marine terminal, impacts of organotins will
17 remain significant (Class I).
18
- 19 ➤ Spill Effects on Water Quality. The severity of impacts from larger leaks or spills at
20 the marine terminal would depend on (1) spill size, (2) oil composition, (3) spill
21 characteristics (instantaneous vs. prolonged discharge), (4) the effect of
22 environmental conditions on spill properties due to weathering, and (5) the
23 effectiveness of cleanup operations. The initial impacts of an oil spill would be to the
24 quality of surface waters and the water column, followed by impacts to sedimentary
25 and shoreline environments. Following an oil spill, hydrocarbon fractions would be
26 partitioned into different regimes and each fraction would potentially affect water
27 quality. Large spills at the Shore marine terminal (greater than 50 bbls) would result
28 in significant adverse (Class I) impacts on water quality. Most tanker spills/accidents
29 and larger spills that cannot be quickly contained either in the Bay or along the outer
30 coast would result in significant, adverse impacts (Class I).
31
- 32 ➤ Oil Spill at Shore Marine Terminal or from Tankers Visiting the Terminal. An oil spill
33 of 1,000 bbls or greater could have significant, adverse impacts on biological
34 resources (Class I). A spill between 50 and 1,000 bbls would also probably have
35 significant biological impacts that might not be avoidable (Class I). The resources at
36 the most immediate risk of oiling from a spill at the Shore marine terminal are Suisun
37 Shoal, Hastings Slough/Point Edith/Seal Island, Bulls Head Marsh/Pacheco Creek,
38 Martinez Marsh and Benicia Marsh. Depending on conditions at the time of the spill,
39 these areas could be contacted within 3 hours of a spill at the Shore marine terminal.
40 Shore Terminals may not have adequate boom available to protect all the sensitive
41 areas that may be oiled within 3 hours of a spill at the terminal. Furthermore, the
42 Area Contingency Plan recommends using sonic devices to scare birds away from
43 Suisun Shoal if this area becomes oiled. Shore Terminals' Oil Spill Response Plan
44 does not identify a source of such sonic devices. Therefore, Shore Terminals should
45 increase the amount of boom it can deploy during the first 3 hours of a spill and
46 should identify a source of sonic devices that could be deployed at Suisun Shoal
47 within 3 hours of a spill. Even with these mitigation measures, the impacts of a large
48 spill to biological resources would be significant (Class I).
49

- 1 ➤ Spill Effects on Biological Resources from Tanker In Transit to Terminal. An oil spill
2 of 1,000 bbl of greater has the potential to have significant adverse impacts on
3 biological resources (Class I) in the shipping lanes or outer coast. A spill between
4 50 and 1,000 bbl would also probably have significant biological impacts that might
5 not be avoidable (Class I). Conclusions are based on relative sensitivity of the
6 resource to oil and the vulnerability of the resources within San Francisco Bay.
7 Responsibility for first response would not fall to Shore as Shore does not own
8 vessels, but would fall to vessel owners and response contractors.
- 9
- 10 ➤ Ballast Water and Storm Water Run-Off on Fisheries. Impacts on commercial and
11 sport fish and habitat near the terminal and the Bay will likely continue from
12 discharge of ballast water and stormwater run-off. With regards to ballast water and
13 non-indigenous species that attach to ship hulls, the invasive species could out
14 compete Dungeness crabs and other species important to the food web. Due to
15 high concentrations of toxins in invasive species tissues, native fishes that feed on
16 these species could ingest large quantities of toxins. Sport and commercial fisheries
17 in the Bay and on the outer coast would likely be impaired and that impairment
18 would likely cause significant (Class I) impacts.
- 19
- 20 ➤ Oil Spill Effects on Fisheries. Potentially significant impacts (Class I) may occur to
21 shrimp, herring fishing, herring spawning, and sport fisheries inside the Bay from an
22 oil spill. Fishing activities would be affected by closure of recreational fishing piers
23 and commercial and recreational fishing marinas. Loss or damage to fisheries and
24 fishing gear would increase the impacts on commercial fishing operations and
25 angling activities. In addition, contamination of fish and habitat would likely result in
26 short- and long-term impacts. Depending on the spread of a spill, the amount of
27 product spilled, the type of product, and effectiveness of response and clean-up
28 operations, these impacts in the Bay may not be mitigated to insignificant. Along the
29 outer coast, impacts also could result in Class I impacts from a large spill.
- 30
- 31 ➤ Spill Effects on Shoreline and Recreation Amenities. Impacts resulting from larger oil
32 releases at the terminal, in the Bay, or along the outer coast have the potential to
33 degrade the environment and preclude the use of shoreline land and/or recreational
34 activity at the site of the release and to the area depending upon the extent of the
35 spread of the oiling. The degree of impact, however, is influenced by many factors,
36 including, but not limited to, spill location, spill size, type of material spilled,
37 prevailing wind and current condition, the vulnerability and sensitivity of the
38 resource, and response capability. Since it is impossible to predict with any certainty
39 the potential consequences of spills, impacts are considered to be adverse and
40 significant (Class I) severe spills if they could have residual effects that remain after
41 first response cleanup occurs.
- 42
- 43 ➤ Spill Effects on Visual Environment. Shore is in an area of rapidly moving current. If
44 a spill is not detected immediately, the spread of a larger spill over a large area could
45 occur, and potentially impact shoreline areas throughout Carquinez Strait and Suisun
46 Bay. Oiling would result in a negative impression of the viewshed that has the
47 potential to result in significant adverse impacts (Class I) if residual effects after first

1 response containment and cleanup remain. Spills in the Bay and along the outer
2 coast could result in significant impacts (Class I), especially where spills would be
3 visible in the nearshore zone or at the shoreline and where residual effects may
4 remain after initial cleanup operations.
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7 **5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD** 8 **BE CAUSED BY THE PROPOSED PROJECT** 9

10 As per the CEQA (Section 15126.2(c)), this section presents the irreversible changes
11 related to the use of, or long-term commitment of, nonrenewable resources. Irreversible
12 changes represent long-term environmental damages that could result from the
13 Proposed Project.
14

- 15 ➤ Of the impacts presented in Section 5.1, above, even the impacts of oil spills over a
16 long enough time period are reversible. However, if a large spill would cause
17 enough water quality or biological damage so as to result in the elimination of a
18 species, an irreversible impact would result.
19
20

21 **5.3 GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT** 22

23 As per the CEQA (Section 15126.2(d)), this section discusses the ways in which the
24 Proposed Project could foster economic or population growth, or induce additional
25 housing, either directly or indirectly in the surrounding environment.
26

27 The Proposed Project involves the granting of a new 20-year lease for operation of the
28 Shore Terminals marine terminal. If granted, the new lease would allow Shore
29 Terminals to continue to operate the Martinez marine terminal, which has been
30 operating since 1974 at its current location under lease from the CSLC. Over the life of
31 the lease, Shore could increase throughput from an increase of annual vessel calls at
32 the wharf from the five-year (1998 to 2002) baseline annual average of 178 to
33 325 vessels. However, no modifications to the wharf are proposed, as the wharf would
34 continue to berth one vessel at a time, the same as current operations. Increased
35 capacity may required an increase in upland storage tankage that would be subject to
36 CEQA review by the city of Martinez. Increased throughput would be the result of
37 changes in market conditions and driven by increased demand for refined products.
38 The terminal would not create or contribute to that demand but would accommodate
39 that demand. As such, since the Proposed Project is considered growth
40 accommodating, it is not considered growth inducing, and would not directly or indirectly
41 foster economic growth, population growth, or the need for housing.